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| SERIAL NUMBER | FILING DATE | FIRST NAMED APPLICANT | ATTORNEY DOCKET NO. |
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| 08/205,045 | 02/02/94 | DI PIETRO | C 52201 |

21M1/0528
WESTINGHOUSE ELECTRIC CORP.
LAW DEPT-INTELLECTUAL
PROPERTY SECTION
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| LABALLE, C | |
| EXAMINER | |
| ART UNIT | PAPER NUMBER |
| 2102 | 6 |
| DATE MAILED: | |

05/28/96

Please find below a communication from the EXAMINER in charge of this application.

Commissioner of Patents

Office Action Summary

Application No.

08/205,045

Applicant(s)

Di Pietro et al.

Examiner

Clayton E. LaBalle

Group Art Unit

2102



☒ Responsive to communication(s) filed on Mar 6, 1996

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1, ~~10~~, 11, 13, 14, and 22-55 is/are pending in the application.

Of the above, claim(s) 44-55 is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1, ~~10~~, 11, 13, 14, and 22-43 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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Newly submitted claims 44-55 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: the method by which the motor was constructed was not previously claimed.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 44-55 are withdrawn from consideration as being directed to a non-elected invention. See 37 C.F.R. § 1.142(b) and M.P.E.P. § 821.03.

After consideration of Applicant's response the examiner makes the following rejections:

Claim 33 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 33 is dependent from claim 34 and the phrases "the proportion of titanium" and "said composition" lack proper antecedent basis. For the purpose of examination, claim 33 is viewed as being dependent form claim 32.

The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the

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art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Claims 1, 10 and 13-14 are rejected under 35 U.S.C. § 103 as being unpatentable over Tanaka in view of Fujii and Petrichenko.

Tanaka discloses the electric vehicle drive system essentially as claimed except for utilizing spray nozzles at the ends of the machine and coating the slots of the rotor or the stator. For example, Tanaka discloses a drive motor for a vehicle which includes an oil-cooled motor which can be an induction or synchronous motor. As is well known in the art, induction motors may have rotors formed as a stack of laminae with a conductive metal such as aluminum or copper cast into openings in the stack to form a cage winding.

Fujii teaches that it is well known to provide spray nozzles at each end of the dynamoelectric machine in order to spray cooling fluid directly onto the end turns of the stator winding to produce an enhanced cooling arrangement resulting in improved machine performance (see lines 60-75, col.1).

It would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized, in the drive motor of Tanaka, spray nozzles at the ends of the machine to directly

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spray cooling fluid onto the windings to enhance the cooling of the machine and to improve the performance of the machine, as disclosed by Fujii.

In regards to coating the slots of the rotor or the stator with a material, such as a ceramic, to protect the rotor or stator during the casting of the conductor, Petrichenko teaches that it is well known to provide a hardfacing or coating on the surface of a mold which is utilized during the die casting of copper. The hardfacing consists of a ceramic material which forms a very thin coating on the surface of the mold which will come into contact with the molten copper. The hardfacing has a high thermal durability and prolongs the life of the mold by providing maximum strengthening and resistance to molten metal attack.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have coated the slots of the rotor or the stator of the motor of Tanaka with a ceramic material in order to protect the rotor or stator from the molten metal during the casting process, as disclosed by Petrichenko.

Claims 22-25 are rejected under 35 U.S.C. § 103 as being unpatentable over Tanaka in view of Fujii and Petrichenko.

Tanaka, Fujii and Petrichenko disclose the motor essentially as claimed except for utilizing the specific material for the coating.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to the specific composition of ceramic materials in the motor of Tanaka, Fujii and

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Petrichenko, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Claims 26-28, 36-38 are rejected under 35 U.S.C. § 103 as being unpatentable over Tanaka in view of Petrichenko.

Tanaka discloses the electric vehicle drive system essentially as claimed except for coating the slots of the rotor or the stator. For example, Tanaka discloses a drive motor for a vehicle which includes an oil-cooled motor which can be an induction or synchronous motor. As is well known in the art, induction motors may have rotors formed as a stack of laminae with a conductive metal such as aluminum or copper cast into openings in the stack to form a cage winding.

Petrichenko teaches that it is well known to provide a hardfacing or coating on the surface of a mold which is utilized during the die casting of copper. The hardfacing consists of a ceramic material which forms a very thin coating on the surface of the mold which will come into contact with the molten copper. The hardfacing has a high thermal durability and prolongs the life of the mold by providing maximum strengthening and resistance to molten metal attack.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have coated the slots of the rotor or the stator of the motor of Tanaka with a ceramic material

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in order to protect the rotor or stator from the molten metal during the casting process, as disclosed by Petrichenko.

Claims 29-35 and 39-43 are rejected under 35 U.S.C. § 103 as being unpatentable over Tanaka in view of Petrichenko.

Tanaka and Petrichenko disclose the motor essentially as claimed except for utilizing the specific material for the coating or the specific material properties.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to the specific composition of ceramic materials or the specific material characteristics in the motor of Tanaka and Petrichenko, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Applicant's amendment necessitated the new grounds of rejection. Accordingly, **THIS ACTION IS MADE FINAL**. See M.P.E.P. § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R.

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§ 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Clayton E. LaBalle whose telephone/voice mail number is (703) 308-0519. The examiner can normally be reach on Monday-Thursday from 6:30 AM-4:00 PM and every other Friday from 6:30 AM-3:00 PM. The examiner can also be reached via E-mail at: claballe@pioneer.uspto.gov.

If attempts to reached the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Stephan, can be reached on (703) 308-2826. The fax phone number for this Group is (703) 305-3431(32).

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-1782.



Clayton E. LaBalle
Primary Examiner
Art Unit 2102
May 24, 1996